

Abstract

A method is described for making aluminum reduction cell components, e.g. cathodes having stabilized surfaces, which comprises mixing together a carbonaceous material, TiB_2 and up to 25% by weight of a finely divided additive consisting of a combination of two intimately mixed compounds and forming the mixture into a cell component, wherein at least a first of the two compounds has a higher melting temperature than the baking temperature. When the cell component is contacted with molten aluminum, the aluminum reacts with the additive to form a dense phase at the surface of the cell component, having low solubility in aluminum.